AF

COMBINED TRANSMITTAL OF APPEAL BRIEF TO THE BOARD OF PATENT APPEALS AND INTERFERENCES & PETITION FOR EXTENSION OF TIME UNDER 37 C.F.R. 1.136(a) (Large Entity)	Docket No. 0318

In Re Application Of: **Reichwein et al.**

Application No.	Filing Date	Examiner	Customer No.	Group Art Unit	Confirmation No.
10/727,749	12/4/2003	Kiliman, Leszek B.	00112	1773	7593

Invention: **PLYWOOD LAMINATE HAVING IMPROVED DIMENSIONAL STABILITY AND RESISTANCE TO WARPING AND DELAMINATION**

TO THE COMMISSIONER FOR PATENTS:

This combined Transmittal of Appeal Brief to the Board of Patent Appeals and Interferences and petition for extension of time under 37 CFR 1.136(a) is respectfully submitted by the undersigned:

Douglas E Winters

Signature

Dated: **December 14, 2006**

Douglas E. Winters
Reg. No. 29,990

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BOARD OF PATENT APPEALS AND INTERFERENCES

In Re Application of:	)	
	)	
Reichwein et al.	)	Examiner: Kiliman, Leszek B.
	)	
Serial No.: 10/727,749	)	Art Unit: 1773
	)	
Filed: December 4, 2003	)	Confirmation No.: 7593
	)	
For: PLYWOOD LAMINATE HAVING IMPROVED DIMENSIONAL STABILITY AND RESISTANCE TO WARPING AND DELAMINATION	)	Customer No.: 00112
	)	Docket No.: 0318

APPEAL BRIEF

Mail Stop Appeal Brief - Patents
Commissioner for Patents
PO Box 1450
Alexandria, Virginia 22313-1450

Sir:

This brief is submitted pursuant to 37 CFR 1.192 in support of the Notice of Appeal filed August 14, 2006, in the above-identified application. A request for a two-month extension of time to December 14, 2005, and payment of the fee is included in the transmittal letter, filed herewith.

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REAL PARTY IN INTEREST

The real party in interest in this application is Armstrong World Industries, Inc., the assignee of the present application.

RELATED APPEALS AND INTERFERENCES

There are no other appeals or interferences known to Appellants, or Appellants' legal representatives, which will directly affect, or be directly affected by, or have a bearing on the Board's decision in the pending Appeal.

STATUS OF CLAIMS

Claims 1 to 64 are pending in the application. All of the pending claims stand rejected. The rejection of all of the pending claims is appealed.

STATUS OF AMENDMENTS

No Advisory Action has been received. The Response After Final, filed on August 14, 2006, did not amend the claims. The Amendment, filed January 26, 2006, was entered. Therefore, the claims are as they appear in the January 26, 2006, amendment.

SUMMARY OF CLAIMED SUBJECT MATTER

The invention is a plywood laminate having dimensional stability and resistance to warping and delamination is formed from a plurality of higher quality plies and a plurality of lower quality plies. The higher quality plies may be of hardwood and the lower quality plies may be of softwood or lower quality hardwoods, or the higher quality plies may have a veneer grade of better than ANSI/HPVA HP-1-2000 veneer grade C and the lower quality plies may have a veneer grade of no greater than ANSI/HPVA HP-1-2000 veneer grade C. The exposed plies are of the higher quality. In most embodiments, at least two adjacent interior plies are of the lower quality. In those embodiments having a tongue and groove or click-lock edge configuration, the tongue comprises portions of at least two plies and at least one of the plies is a higher quality ply. (See Abstract.)

Element-by-element support for the claims that are separately argued is found in the original application as set forth below:

1. A plywood laminate – paragraph 0009 and original claim 1
    - a plurality of higher grade wood plies - paragraph 0009 and original claim 1
    - a plurality of lower grade wood plies - paragraph 0009 and original claim 1
    - an adhesive interposed between the adjacent plies adhering the plies together - paragraph 0020 and original claim 1
    - the plurality of higher grade plies having a veneer grade of better than ANSI/HPVA HP-1-2000 veneer grade C - paragraph 0009 and original claim 1
    - the plurality of lower grade plies having a veneer grade of no greater than ANSI/HPVA HP-1-2000 veneer grade C - paragraph 0009 and original claim 1.

2. See the previous claim and the following new elements
    - an even number of plies - paragraphs 0023, 0024 and 0027 and original claim 2
    - the laminate comprising two opposed plies having an exposed major surface and at least two interior plies having no major surface exposed - paragraph 0024 and original claim 2
    - the direction of the grain of adjacent plies being substantially perpendicular to each other, whereby a first plurality of plies has grain in a first direction and a second plurality of plies has grain in a second direction substantially perpendicular to the direction of the grain in the first plurality - paragraphs 0023, 0024 and 0026, and original claim 2
    - the opposed plies being plies from the plurality of higher grade plies - paragraphs 0020 and 0022, and original claim 2
    - and the plurality of lower grade plies including at least one interior ply from the first plurality of plies and at least one interior ply from the second plurality of plies - paragraph 0024 and original claim 2.

3. See the previous claims and the following new elements
    - six plies, the interior ply adjacent a first opposed ply being a ply from the plurality of lower grade plies, the next adjacent interior ply being a ply from the plurality of higher grade plies, the next adjacent interior ply being a ply from the plurality of lower grade plies, the next adjacent interior ply being a ply from the plurality of lower grade plies, and the next adjacent ply being the second opposed ply – original claim 3.

4. See the previous claims and the following new elements
    - the second opposed ply has a thickness less than the thickness of the other plies – original claim 4.

5. See the previous claims and the following new elements
    - the second opposed ply has a thickness approximately two-thirds of the thickness of the other substrate plies – original claim 5.

6. See the previous claims and the following new elements
    - a first opposed ply has a quality less that the quality of the other plies from the plurality of higher grade plies – original claim 6.

7. See the previous claims and the following new elements
    - the first opposed ply has a quality less that the quality of the other plies from the plurality of higher grade plies – original claim 7.

8. See the previous claims and the following new elements
    - all of the plies are hardwoods – paragraphs 0009, 0021 and 0029, and original claim 8.

9. See the previous claims and the following new elements
    - all of the plies are of a species selected from the group consisting of meranti, lauan and combinations thereof – paragraph 0029 and original claim 9.

12. See the previous claims and the following new elements
    - the plywood laminate has a moisture barrier applied to exposed surfaces of the laminate, the moisture barrier having an effectiveness of at least 80% – paragraph 0035 and original claim 12.

13. The See the previous claims and the following new elements
    - the moisture barrier has an effectiveness of at least 90% – paragraph 0035 and original claim 12.

14. See the previous claims and the following new elements
    - all of the plies have a grain direction of 1/48 or less % – paragraph 0036 and original claim 14.

17. See the previous claims and the following new elements
    - the total number of plies is selected from the group consisting of 4, 6 and 8% – original claim 17.

21. See the previous claims and the following new elements
    - the at least one inner ply is a ply from the plurality of lower grade plies, the back ply is a ply from the plurality of higher grade plies and, and the plurality of crossband plies comprises a ply from the plurality of higher grade plies and a ply from the plurality of lower grade plies – original claim 21.

22. See the previous claims and the following new elements
    - the crossband ply adjacent the decorative ply is a ply from the plurality of higher grade plies – original claim 22.

23. See the previous claims and the following new elements
    - the substrate has six plies, the crossband ply adjacent the decorative ply being a ply from the plurality of higher grade plies, the next adjacent inner ply being a ply from the plurality of lower grade plies and having grain substantially parallel to the grain of the decorative ply, the next adjacent crossband ply being a ply from the plurality of higher grade plies, the next adjacent inner ply being a ply from the plurality of lower grade plies and having grain substantially parallel to the grain of the decorative ply, the next adjacent crossband ply being a ply from the plurality of lower grade

plies, and the next adjacent ply being the back ply, the back ply being a ply from the plurality of higher grade plies – original claim 23.

24. See the previous claims and the following new elements
    - the back ply has a thickness less than the thickness of the other substrate plies – original claim 24.

25. See the previous claims and the following new elements
    - the back ply has a thickness approximately two-thirds of the thickness of the other substrate plies – original claim 25.

26. See the previous claims and the following new elements
    - the crossband ply adjacent the decorative ply has a quality less that the quality of the other plies from the plurality of higher grade plies – original claim 26.

27. See claim 8 above.

28. See claim 9 above.

31. See claim 12 above.

32. See claim 13 above.

33. See claim 14 above.

41. See the previous claims and the following new elements
    - the tongue and groove forms a click-lock connection – paragraphs 0001, 0007, 0008, 0014, 0019, 0020 and 0025, and original claim 41.

44. See claim 41 above.

46. See the previous claims and the following new elements
    - a polymer resin-impregnated layer and a printed pattern applied to the resin-impregnated layer paragraph 0037 and original claim 46.

47. See the previous claims and the following new elements
    - the ply adjacent one of the exposed plies being a lower quality ply, and the next adjacent ply being a lower quality ply – original claim 47.

48. See claim 4 above.

49. See the previous claims and the following new elements
    - the plurality of lower quality plies are formed from plies selected from the group of a softwood and a lower quality hardwood - paragraphs 0009 and 0021, and original claim 49.

52. See the previous claims and the following new elements
    - the decorative plywood laminate – paragraphs 0001, 0013, 0014, 0020 and 0025, and original claim 52,
    - the tongue and groove forms a click-lock connection, see claim 41 above and original claim 52.

56. See the previous claims and the following new elements
    - the tongue having an upper surface and a lower surface spaced from the upper surface, at least one adhesive layer being interposed between the upper surface and the lower surface of the tongue, the tongue comprising a portion of at least one ply having a higher quality - paragraph 0014 and original claim 56.

57. See claim 41 above.

59. See claim 46 above.

60. See the previous claims and the following new elements
    - the edge configuration including a projection, the thickness of the projection being greater than the thickness of each of the plies – Figures 1 and 2.

62. See the previous claims and the following new elements
    - the edge configuration including a projection, the projection comprising portions of at least three plies – Figures 1 and 2.

GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Are claims 1 to 64 properly rejected under 35 U.S.C. § 103(a) as being unpatentable over Hudson U. S. Patent No. 5,967,625 ("Hudson") in view of Lee U.S. Patent No. 5,643,983 ("Lee")?

ARGUMENT

In the Final Office Action mailed from the U. S. Patent and Trademark Office on April 14, 2006, ("Final Office Action), the Primary Examiner maintained the rejection of all of the pending claims as being obvious over Hudson in view of Lee.

Attorney for Applicants will argue separately the patentability of claims 1 to 9, 12 to 14, 17, 21 to 28, 31 to 33, 41, 44, 46 to 49, 52, 56, 57, 59, 60 and 62. The remaining claims stand or fall with claims from which they directly or indirectly depend.

Section 103(a) Rejection of Claims 1 to 64 over Hudson in view of Lee

Claims 1 and 48

Near the bottom of page 2 of the Final Office Action mailed April 14, 2006 (the Final Office Action), the Examiner takes the position that Hudson "teaches that type of wood used for layers may vary and clearly suggest[s] the use of lower and higher grade veneer for individual layers." The Examiner admits that Hudson "does not specifically teach the veneer grade" and looks to Lee for a "teach[ing] that it is customary in the art to subject plywood laminate to a standard ANSI/HPVAHP test (see column 2 lines 15-40)." The Examiner then takes the position that "[i]t would have been obvious to one having ordinary skill in the art at the time of the invention to chose the veneer grade according to standard test as suggested by Lee '983 in Hudson '625 since such would improve processability of the plywood laminate."

However, present claims 1 and 48 require at least two pluralities of wood plies, one having a veneer grade better than ANSI/HPVA veneer grade C and another having a veneer grade no greater than ANSI/HPVA veneer grade C. The cited test of Lee is used

to determine adhesive bond strength between the veneers of plywood rather than the grade of the veneers. Therefore, Lee does not teach or suggest measuring the grade of the laminate veneer, let alone specifying the veneer grades required by claims 1 and 48.

The fact that the test cited by Lee also includes a test method and veneer grade standard does not teach or suggest that the wood plies of Hudson be graded and particularly does not teach or suggest the limitation set forth in claims 1 and 48 that one plurality of wood plies have a veneer grade better than ANSI/HPVA veneer grade C and another plurality of wood plies have a veneer grade no greater than ANSI/HPVA veneer grade C. Without such a teaching or suggestion to make the claimed combination of elements, the rejection is improper.

As stated by the Court of Appeals for the Federal Circuit in In re Kotzab, 217 F.3d 1365, 1369-1370 (2000):

> "Most if not all inventions arise from a combination of old elements. Thus, every element of a claimed invention may often be found in the prior art. However, identification in the prior art of each individual part claimed is insufficient to defeat patentability of the whole claimed invention. Rather, to establish obviousness based on a combination of the elements disclosed in the prior art, there must be some motivation, suggestion or teaching of the desirability of making the specific combination that was made by the applicant. Even when obviousness is based on a single prior art reference, there must be a showing of a suggestion or motivation to modify the teachings of that reference.
>
> "The motivation, suggestion or teaching may come explicitly from statements in the prior art, the knowledge of one of ordinary skill in the art, or, in some cases the nature of the problem to be solved. In addition, the teaching, motivation or suggestion may be implicit from the prior art as a whole, rather than expressly stated in the references. The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art. Whether the Board relies on an express or an implicit showing, it must provide particular findings related thereto. Broad conclusory statements standing alone are not 'evidence.'"

(Citations omitted.) The Examiner has attempted to "provide particular finding related thereto" by stating that choosing the veneer grades of claims 1 and 48 would improve processability of the plywood laminate. However, it is not seen how choosing the veneer grades would improve processability of the plywood laminate. Without the previously requested explanation of how choosing the veneer grades would improve processability of the plywood laminate, the Examiner's statement is a "broad conclusory statement" and not "evidence" of obviousness.

Even assuming arguendo that choosing the veneer grades would improve processability of the plywood laminate, there is no teaching or suggestion in the cited prior art that the claimed plurality of veneer grades of having better than ANSI/HPVA veneer grade C and no greater than ANSI/HPVA veneer grade C would provide the improved processability.

The Examiner was respectfully requested to explain where in the cited art there is such a teaching or suggestion, or if the rejection is based on facts within the personal knowledge of the Examiner, for support in the form of an affidavit, in accordance with MPEP section 707. The Examiner has yet to provide such explanation or affidavit. Therefore, claims 1 and 48 must be allowed.

As set forth in *In re Fine,* 837 F.2d at 1075, 5 USPQ2d at 1600 (Fed.Cir. 1988):

> "Obviousness is tested by 'what the combined teachings of the references would have suggested to those of ordinary skill in the art.' *In re Keller,* 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981). But it 'cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination.' *ACS Hosp. Sys.,* 732 F.2d at 1577, 221 USPQ at 933. And 'teachings of references can be combined *only* if there

> is some suggestion or incentive to do so.' *Id.* Here, the prior art contains none.

The Examiner continues to fail to point out where in the cited prior art there is a suggestion or incentive to combine Hudson and Lee. Since such a suggestion of using veneer of ANSI/HPVA grade C or lower and veneer of better than ANSI/HPVA grade C in the same plywood laminate is absent in Hudson and Lee, claims 1 and 48 are allowable over the combination of Hudson and Lee.

Claim 2

Claim 2 requires a plywood laminate having an even number of plies. At the top of page 3 of the Final Office Action, the Examiner states "it would have been obvious to vary the number of plies ... since such would improve strength of the laminate." Even assuming arguendo that it would be obvious to vary the number of plies to improve strength of the laminate, where is the teaching or suggestion that an even number piles yields a stronger laminate? Without such a teaching or suggestion, claim 2 is allowable over Hudson in view of Lee.

Hudson specifically states that his invention is comprised of five laminated layers or plies. See column 3, lines 66 and 67; column 7, lines 46 and 47; and column 6, lines 1 to 11. Attorney for Applicants respectfully requested the Examiner to explain where in the cited art there is a teaching or suggestion of using an even number of plies of quality, or if the rejection is based on facts within the personal knowledge of the Examiner, for support in the form of an affidavit, in accordance with MPEP section 707. The Examiner has yet to provide such explanation or affidavit. Therefore, claim 2 must be allowed.

Further, claim 2 requires the lower grade plies to include at least one ply with grain in each direction, i.e. at least one lower grade ply that is cross-grain and at least one lower grade ply with grain parallel to the length of the ply. Hudson teaches that the intermediate plies 64 and 68, the 2nd and 4th plies having cross-ply grain, may be of inferior grade relative to the surface ply (column 4, lines 36 to 39). At column 8, lines 4 to 7, Hudson teaches that the center ply 66 and backing ply 70 (with grain parallel to the length of the plies) are made from new pine, whereas the intermediate plies 64 and 68 are made from reclaimed pine sapwood. There is no teaching in Hudson of plies with grain in different directions being of a lower grade.

The Examiner was respectfully requested to explain where in the cited art there is such a teaching or suggestion, or if the rejection is based on facts within the personal knowledge of the Examiner, for support in the form of an affidavit, in accordance with MPEP section 707. Near the top of page 3 of the Final Office Action, the Examiner referenced column 1, lines 45 to 55, of Hudson for a teaching of grain direction. However, this citation teaches "alternating plies [being] laid transverse to each other." Since Hudson teaches alternating the inferior grade plies and the grain direction, there is no teaching or suggestion of the same grade of plies having transverse grain directions. Therefore, claim 2 must be allowed over the cited prior art.

Claim 3

Claim 3 requires the laminate to have 6 plies. Again, Hudson teaches a laminate with 5 plies. Claim 3 also requires two adjacent plies to be of a lower grade. There is no teaching in Hudson of adjacent plies being of a lower grade. The Examiner was

respectfully requested to explain where in the cited art there is such a teaching or suggestion, or if the rejection is based on facts within the personal knowledge of the Examiner, for support in the form of an affidavit, in accordance with MPEP section 707. The Examiner has yet to provide such explanation or affidavit. Therefore, claim 3 must be allowed.

Claims 4, 5, 24 and 25

Claim 4 requires the second opposed ply to have a thickness less than the thickness of the other plies, claim 5 requires the second opposed ply to have a thickness approximately two-thirds of the thickness of the other plies, claim 24 requires the back ply to have a thickness less than the thickness of the other plies, and claim 25 requires the back ply to have a thickness approximately two-thirds of the thickness of the other plies. Near the middle of page 3 of the Final Office Action, the Examiner states that "it would have been obvious to optimize thickness ... of the individual layers since such is known to improve mechanical properties of the laminate." Again, Attorney for Applicants respectfully requested that the Examiner explain how making the second opposed ply or the back ply thinner than the other plies improves mechanical properties of the laminate. Without such an explanation, there is no motivation to make such a modification, as required by In re Fine, supra, and the rejection of claims 4, 5, 24 and 25 is improper.

Claims 6, 7 and 26

Claims 6 and 7 require the first opposed ply, which is a higher grade ply, to have a quality less than the quality of the other higher grade plies, i.e. there are three different

qualities of plies. In similar manner claim 26 requires crossband ply adjacent the decorative ply, which is a higher grade ply, to have a quality less than the quality of the other higher grade plies. Attorney for Applicants respectfully requested the Examiner to explain where in the cited art there is such a teaching or suggestion of using three different qualities of plies, or if the rejection is based on facts within the personal knowledge of the Examiner, for support in the form of an affidavit, in accordance with MPEP section 707. The Examiner has yet to provide such explanation or affidavit. Therefore, claims 6 and 7 must be allowed.

Claims 8, 9, 27 and 28

Claims 8 and 27, and claims 9 and 28 require the plies to be hardwoods, and meranti or lauan, respectively. The Examiner has not yet pointed to a teaching or suggestion in the prior art of such features in combination with the specified grades of veneer. Attorney for Applicants respectfully requested the Examiner to explain where in the cited art there is such a teaching or suggestion, or if the rejection is based on facts within the personal knowledge of the Examiner, for support in the form of an affidavit, in accordance with MPEP section 707. The Examiner has yet to provide such explanation or affidavit. Therefore, claims 8, 9, 27 and 28 must be allowed.

Claims 12, 13, 31 and 32

Claims 12, 13, 31 and 32 require a moisture barrier applied to the exposed surfaces of the laminate. Attorney for Applicants respectfully requested the Examiner to explain where in the cited art there is such a teaching or suggestion, or if the rejection is

based on facts within the personal knowledge of the Examiner, for support in the form of an affidavit, in accordance with MPEP section 707. Near the middle of page 3 of the Final Office Action, the Examiner cited column 2, lines 1 to 10, of Hudson for a teaching of moisture content for veneer laminates. However, the cited passage does not teach or suggest a moisture barrier. Without such a teaching or suggestion, claims 12, 13, 31 and 32 must be allowed.

Claims 14 and 33

Claims 14 and 33 require the plies to have a grain direction of 1/48 or less. The Examiner has not pointed to a teaching or suggestion in the prior art of a such feature, particularly in combination with the specified grades of veneer. Attorney for Applicants respectfully requested the Examiner to explain where in the cited art there is such a teaching or suggestion, or if the rejection is based on facts within the personal knowledge of the Examiner, for support in the form of an affidavit, in accordance with MPEP section 707. The Examiner has yet to provide such explanation or affidavit. Therefore, claims 14 and 33 must be allowed.

Claim 17

Claim 17 requires the total number of plies in the plywood laminate to be 4, 6 or 8. Claim 17 is allowable for the same reasons argued in the first two paragraphs regarding claim 2 and the reasons argued regarding claim 3.

Claim 21

Claim 21 requires the crossband plies to include a higher grade ply and a lower grade ply. The Examiner has not pointed to a teaching or suggestion in the prior art of such a feature, particularly in combination with the specified grades of veneer. Attorney for Applicants respectfully requested the Examiner to explain where in the cited art there is such a teaching or suggestion, or if the rejection is based on facts within the personal knowledge of the Examiner, for support in the form of an affidavit, in accordance with MPEP section 707. The Examiner has yet to provide such explanation or affidavit. Therefore, claim 21 must be allowed.

Claim 22

The Examiner has not pointed to any prior art which shows a decorative plywood laminate having different grades of veneer plies with the crossband ply adjacent the decorative ply being a higher grade ply. Absent such a suggestion, claim 22 is allowable.

Claim 23

Likewise with respect to claim 23, the Examiner has not identified any prior art that shows the specifically claimed structure, particularly two adjacent plies being lower grade plies. Therefore, claim 23 is allowable.

Claims 41, 44, 52, 56, 60 and 62

At the bottom of page 3 of the Final Office Action, the Examiner takes the position that regarding "claims related to tongue and groove and click-lock connections

the examiner submits that such connections are so well established in the art that it would have been obvious to one having ordinary skill in the art to incorporate such connections into any design for laminated veneer." This is the type of broad conclusory statement the Appeals for the Federal Circuit in In re Kotzab, supra, counseled against.

At the time of filing the present application, applicants did not know of any plywood laminates having a click-lock connection. Due to the different materials and different structures, it is not obvious that a click-lock tongue formed from a plywood laminate could function, for example, would the tongue be strong enough and flexible enough. If the Examiner is correct that such connections were so well established, the Examiner should be able to find prior art to support that position.

Again, as stated by the Court of Appeals for the Federal Circuit in In re Kotzab, 217 F.3d 1365, 1369-1370 (2000):

> "Most if not all inventions arise from a combination of old elements. Thus, every element of a claimed invention may often be found in the prior art. However, identification in the prior art of each individual part claimed is insufficient to defeat patentability of the whole claimed invention. Rather, to establish obviousness based on a combination of the elements disclosed in the prior art, there must be some motivation, suggestion or teaching of the desirability of making the specific combination that was made by the applicant. ....
>
> "The motivation, suggestion or teaching may come explicitly from statements in the prior art, the knowledge of one of ordinary skill in the art, or, in some cases the nature of the problem to be solved. In addition, the teaching, motivation or suggestion may be implicit from the prior art as a whole, rather than expressly stated in the references. The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art. Whether the Board relies on an express or an implicit showing, it must provide particular findings related thereto. Broad conclusory statements standing alone are not 'evidence.'"

Without support in the prior art or an affidavit of the Examiner, the Examiner's rejection of the click-lock claims is at most an invitation to try a click-lock tongue and groove on a plywood laminate. "Obvious to try" is not the standard under Section 103. See In re O'Farrell, 853 F.2d 893, 903 (CAFC 1988):

> "The admonition that 'obvious to try' is not the standard under § 103 has been directed mainly at two kinds of error. .... In others, what was 'obvious to try' was to explore a new technology or general approach that seemed to be a promising field of experimentation, where the prior art gave only general guidance as to the particular form of the claimed invention or how to achieve it."

(Citations omitted.) While it may have seemed promising at the time of filing the present application to use a click-lock profile on a plywood laminate, the Examiner has not pointed to a prior art reference which gives guidance to use a click-lock profile on a plywood laminate. Therefore, unless the Examiner can find a reference to support the position, there was, at most, only a general guidance taught in the prior art, the rejection is improper, and claims 41, 44, 52, 56, 60 and 62 must be allowed.

Claims 41, 44, 52, 56, 57 and 60

Further, claims 41, 52 and 60 require the thickness of the click-lock tongue to be greater that the thickness of each of the plies of the substrate and claims 44, 56 and 57 require the click-lock tongue to include an adhesive layer. Attorney for Applicants respectfully requested the Examiner to explain where in the cited art there are such teachings or suggestions, or if the rejections are based on facts within the personal knowledge of the Examiner, for support in the form of an affidavit, in accordance with

MPEP section 707. The Examiner has yet to provide such explanation or affidavit. Therefore, claims 41, 44, 52, 56, 57 and 60 must be allowed.

Claims 46 and 59

Claims 46 and 59 require the decorative ply to comprise a polymer resin-impregnated layer and a printed pattern applied to the resin-impregnated layer. Attorney for Applicants respectfully requested the Examiner to explain where in the cited art there is a teaching or suggestion of a decorative ply comprising a polymer resin-impregnated layer and a printed pattern applied to the resin-impregnated layer in combination with the specified grades of veneer, or if the rejections are based on facts within the personal knowledge of the Examiner, for support in the form of an affidavit, in accordance with MPEP section 707. The Examiner has yet to provide such explanation or affidavit. Therefore, claims 46 and 59 must be allowed.

Claim 47

Claim 47 requires one exposed ply to be of higher quality, the adjacent ply to be of lower quality and the next adjacent ply to be of lower quality. Attorney for Applicants respectfully requested the Examiner to explain where in the cited art there are such teachings or suggestions, or if the rejections are based on facts within the personal knowledge of the Examiner, for support in the form of an affidavit, in accordance with MPEP section 707. The Examiner has yet to provide such explanation or affidavit. Therefore, claim 47 must be allowed.

Claim 49

Claim 49 requires three types of plies, a higher quality hardwood, a lower quality hardwood and a lower quality softwood. Attorney for Applicants respectfully requested the Examiner to explain where in the cited art there is such a teaching or suggestion, or if the rejection is based on facts within the personal knowledge of the Examiner, for support in the form of an affidavit, in accordance with MPEP section 707. The Examiner has yet to provide such explanation or affidavit. Therefore, claim 49 must be allowed.

Claim 62

Claim 62 requires the projection of the click-lock connection to comprise at least three plies. Attorney for Applicants respectfully requested the Examiner to explain where in the cited art there is such a teaching or suggestion, or if the rejection is based on facts within the personal knowledge of the Examiner, for support in the form of an affidavit, in accordance with MPEP section 707. The Examiner has yet to provide such explanation or affidavit. Therefore, claim 62 must be allowed.

Accordingly, all of the pending claims should be found allowable. Reversal of the rejections is respectfully requested.

Respectfully submitted,

12/14/06
Date

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CLAIMS APPENDIX

Pending Claims

1. A plywood laminate comprising a plurality of higher grade wood plies, a plurality of lower grade wood plies and an adhesive interposed between the adjacent plies adhering the plies together, the plurality of higher grade plies having a veneer grade of better than ANSI/HPVA HP-1-2000 veneer grade C and the plurality of lower grade plies having a veneer grade of no greater than ANSI/HPVA HP-1-2000 veneer grade C.

2. A plywood laminate comprising an even number of plies and an adhesive interposed between the adjacent plies adhering the plies together, the plies comprising a plurality of higher grade wood plies and a plurality of lower grade wood plies, the laminate comprising two opposed plies having an exposed major surface and at least two interior plies having no major surface exposed, the direction of the grain of adjacent plies being substantially perpendicular to each other, whereby a first plurality of plies has grain in a first direction and a second plurality of plies has grain in a second direction substantially perpendicular to the direction of the grain in the first plurality, the opposed plies being plies from the plurality of higher grade plies, and the plurality of lower grade plies including at least one interior ply from the first plurality of plies and at least one interior ply from the second plurality of plies.

3. The plywood laminate of claim 2 comprising six plies, the interior ply adjacent a first opposed ply being a ply from the plurality of lower grade plies, the next adjacent interior ply being a ply from the plurality of higher grade plies, the next adjacent interior ply being a ply from the plurality of lower grade plies, the next adjacent interior ply being a ply from the plurality of lower grade plies, and the next adjacent ply being the second opposed ply.

4. The plywood laminate of claim 3, wherein the second opposed ply has a thickness less than the thickness of the other plies.

5. The plywood laminate of claim 4, wherein the second opposed ply has a thickness approximately two-thirds of the thickness of the other substrate plies.

6. The plywood laminate of claim 2, wherein a first opposed ply has a quality less that the quality of the other plies from the plurality of higher grade plies.

7. The plywood laminate of claim 3, wherein the first opposed ply has a quality less that the quality of the other plies from the plurality of higher grade plies.

8. The plywood laminate of claim 1, wherein all of the plies are hardwoods.

9. The plywood laminate of claim 1, wherein all of the plies are of a species selected from the group consisting of meranti, lauan and combinations thereof.

10. The plywood laminate of claim 1, wherein all of the plies have a density of between about 400 kg/m^3 and about 600 kg/m^3.

11. The plywood laminate of claim 1, wherein all of the plies have moisture content at least 6% and no more than 8%.

12. The plywood laminate of claim 1, wherein the plywood laminate has a moisture barrier applied to exposed surfaces of the laminate, the moisture barrier having an effectiveness of at least 80%.

13. The plywood laminate of claim 12, wherein the moisture barrier has an effectiveness of at least 90%.

14. The plywood laminate of claim 1, wherein all of the plies have a grain direction of 1/48 or less.

15. The plywood laminate of claim 1, wherein the adhesive comprises a phenol-formaldehyde resin.

16. The plywood laminate of claim 1, wherein the adhesive comprises a melamine-urea-formaldehyde resin.

17. The plywood laminate of claim 1, wherein the total number of plies is selected from the group consisting of 4, 6 and 8.

18. The plywood laminate of claim 1, wherein all of the plies have a thickness of about 0.03 inches to about 0.07 inches.

19. A decorative plywood laminate comprising a decorative ply and a plywood substrate, the plywood substrate being the plywood laminate of claim 1.

20. The decorative plywood laminate of claim 19, wherein the decorative ply is adjacent a crossband ply of the substrate, wherein a back ply distal the decorative ply has a grain direction substantially parallel to the direction of the grain of the decorative ply, at least one inner ply has a grain direction substantially parallel to the direction of the grain of the decorative ply, and a plurality of crossband plies have a grain direction substantially perpendicular to the direction of the grain of the decorative ply.

21. The decorative plywood laminate of claim 20, wherein, the at least one inner ply is a ply from the plurality of lower grade plies, the back ply is a ply from the plurality of higher grade plies and, and the plurality of crossband plies comprises a ply from the plurality of higher grade plies and a ply from the plurality of lower grade plies.

22. The decorative plywood laminate of claim 21, wherein the crossband ply adjacent the decorative ply is a ply from the plurality of higher grade plies.

23. The decorative plywood laminate of claim 20, wherein the substrate has six plies, the crossband ply adjacent the decorative ply being a ply from the plurality of higher grade plies, the next adjacent inner ply being a ply from the plurality of lower grade plies and having grain substantially parallel to the grain of the decorative ply, the next adjacent crossband ply being a ply from the plurality of higher grade plies, the next adjacent inner ply being a ply from the plurality of lower grade plies and having grain substantially parallel to the grain of the decorative ply, the next adjacent crossband ply being a ply from the plurality of lower grade plies, and the next adjacent ply being the back ply, the back ply being a ply from the plurality of higher grade plies.

24. The decorative plywood laminate of claim 23, wherein the back ply has a thickness less than the thickness of the other substrate plies.

25. The decorative plywood laminate of claim 24, wherein the back ply has a thickness approximately two-thirds of the thickness of the other substrate plies.

26. The decorative plywood laminate of claim 22, wherein the crossband ply adjacent the decorative ply has a quality less that the quality of the other plies from the plurality of higher grade plies.

27. The decorative plywood laminate of claim 19, wherein all of the plies of the substrate are hardwoods.

28. The decorative plywood laminate of claim 19, wherein all of the plies of substrate are selected from the group consisting of meranti, lauan and combinations thereof.

29. The decorative plywood laminate of claim 19, wherein all of the plies of the substrate have a density of between about 400 kg/m^3 and about 600 kg/m^3.

30. The decorative plywood laminate of claim 19, wherein the decorative laminate has a moisture content at least 6% and no more than 8%.

31. The decorative plywood laminate of claim 19, wherein the decorative laminate has a moisture barrier applied to exposed surfaces of the decorative laminate, the moisture barrier having an effectiveness of at least 80%.

32. The decorative plywood laminate of claim 31, wherein the moisture barrier has an effectiveness of at least 90%.

33. The decorative plywood laminate of claim 19, wherein all of the plies of substrate have a grain direction of 1/48 or less.

34. The decorative plywood laminate of claim 19, wherein the adhesive comprises a phenol-formaldehyde resin.

35. The decorative plywood laminate of claim 19, wherein the adhesive comprises a melamine-urea-formaldehyde resin.

36. The decorative plywood laminate of claim 19, wherein the decorative ply is a hardwood.

37. The decorative plywood laminate of claim 36, wherein the hardwood is oak.

38. The decorative plywood laminate of claim 19, wherein the total number of plies is selected from the group consisting of 5, 7 and 9.

39. The decorative plywood laminate of claim 19, wherein all of the plies of the substrate have a thickness of about 0.03 inches to about 0.07 inches.

40. The decorative plywood laminate of claim 19, wherein the decorative laminate comprises a tongue and groove, the thickness of the tongue being greater than the thickness of each of the plies of the substrate.

41. The decorative plywood laminate of claim 40, wherein the tongue and groove forms a click-lock connection.

42. The decorative plywood laminate of claim 40, wherein the tongue comprises a portion of at least one ply having a higher grade.

43. The decorative plywood laminate of claim 19, wherein the decorative plywood laminate comprises a tongue and groove, the tongue having an upper surface and a lower surface spaced from the upper surface, at least one adhesive layer being interposed between the upper surface and the lower surface of the tongue.

44. The decorative plywood laminate of claim 43, wherein the tongue and groove forms a click-lock connection.

45. The decorative plywood laminate of claim 43, wherein the tongue comprises a portion of at least one ply having a higher grade.

46. A decorative plywood laminate comprising the plywood laminate of claim 1 and a decorative ply, the decorative ply comprising a polymer resin-impregnated layer and a printed pattern applied to the resin-impregnated layer.

47. A plywood laminate comprising a plurality of at least four wood plies, a first plurality of plies having a grain in a first direction and a second plurality of plies having a grain in a second direction substantially perpendicular to the direction of the grain in the first plurality, the plies having exposed major surfaces comprising plies from the first plurality of plies, the grain of the exposed plies being substantially parallel to the lengthwise edge of the ply, the wood plies comprising a plurality of higher quality plies and a plurality of lower quality plies, the exposed plies comprising plies from the plurality of higher quality plies, the ply adjacent one of the exposed plies being a lower quality ply, and the next adjacent ply being a lower quality ply.

48. The plywood laminate of claim 47, wherein the plurality of higher quality plies have a veneer grade of better than ANSI/HPVA HP-1-2000 veneer grade C and the plurality of lower quality plies have a veneer grade of no greater than ANSI/HPVA HP-1-2000 veneer grade C.

49. The plywood laminate of claim 47, wherein the plurality of higher quality plies is formed from a hardwood and the plurality of lower quality plies are formed from plies selected from the group of a softwood and a lower quality hardwood.

50. The plywood laminate of claim 47, wherein one of the exposed plies is a decorative ply, whereby the plywood laminate is a decorative plywood laminate.

51. The decorative plywood laminate of claim 50, wherein the decorative laminate comprises a tongue and groove, the thickness of the tongue being greater than the thickness of each of the plies of the substrate.

52. The decorative plywood laminate of claim 51, wherein the tongue and groove forms a click-lock connection.

53. The decorative plywood laminate of claim 51, wherein the tongue comprises a portion of at least one ply having a higher quality.

54. The decorative plywood laminate of claim 50, wherein the decorative laminate comprises a tongue and groove, the tongue having an upper surface and a lower surface spaced from the upper surface, at least one adhesive layer being interposed between the upper surface and the lower surface of the tongue.

55. The decorative plywood laminate of claim 54, wherein the tongue comprises a portion of at least one ply having a higher quality.

56. A plywood laminate comprising two opposed wood plies and a plurality of interior wood plies interposed between the two opposed plies, the wood plies comprising a plurality of higher quality plies and at least one lower quality ply, the laminate further comprising a click-lock tongue and groove, the tongue having an upper surface and a lower surface spaced from the upper surface, at least one adhesive layer being interposed between the upper surface and the lower surface of the tongue, the tongue comprising a portion of at least one ply having a higher quality.

57. The plywood laminate of claim 54, wherein the tongue and groove forms a click-lock connection.

58. The plywood laminate of claim 56, wherein the opposed plies are plies from the plurality of higher quality plies, the plurality of interior plies comprising at least one lower quality ply and at least one higher quality ply, the tongue comprising a portion of at least one lower quality ply and a portion of at least one higher quality ply.

59. A decorative plywood laminate comprising the plywood laminate of claim 56 and a decorative ply, the decorative ply comprising a polymer resin-impregnated layer and a printed pattern applied to the resin-impregnated layer.

60. A plywood laminate comprising a plurality of plies, at least one edge configuration of the plywood laminate being selected from the group consisting of a tongue edge configuration and a groove configuration, wherein the edge configuration when mated with the edge configuration of a second plywood laminate forms a click-lock connection, the edge configuration including a projection, the thickness of the projection being greater than the thickness of each of the plies.

61. The plywood laminate of claim 60, wherein the projection is a tongue.

62. A plywood laminate comprising a plurality of plies, at least one edge configuration of the plywood laminate being selected from the group consisting of a tongue edge configuration and a groove configuration, wherein the edge configuration when mated with the edge configuration of a second plywood laminate forms a click-lock connection, the edge configuration including a projection, the projection comprising portions of at least three plies.

63. The plywood laminate of claim 62, wherein the projection is a tongue.

64. A decorative plywood laminate comprising a decorative ply and a plywood substrate, the plywood substrate being the plywood laminate of claim 2.

EVIDENCE APPENDIX

None

RELATED PROCEEDINGS APPENDIX

None